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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/299,596	04/27/1999	TONG HYONG LEE	0630-0913P	3472

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EXAMINER	
KARMIS, STEFANOS	

ART UNIT	PAPER NUMBER
3624	

DATE MAILED: 03/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/299,596	LEE, TONG HYONG	
	Examiner	Art Unit	
	Stefano Karmis	3624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 December 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *3-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *3-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *8/01, 5/03, 7/04*.
4) ☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. *2/22/05*.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This communication is in response to Applicant's amendment filed 06 December 2004.

Status of Claims

2. Claims 1-2 have been previously cancelled. Claims 3-21, 23-24 and 26-32 have previously been amended. Claims 22, 25 and 33 have been left as originally filed. Therefore claims 3-33 are under prosecution in this application.

Response to Arguments

3. Applicant's arguments filed 06 December 2004 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made and discussed below.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 3, 4, 7, 10-14, 16-22 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takami et al. (hereinafter Takami) U.S. Patent 6,536,661 in view of Dahm et al. (hereinafter Dahm) U.S. Patent 6,466,783.

Claims 3, 10, 16, 17 and 26 Takami teaches an apparatus for storing money in which a radio signal related to balance storing information is received, a memory block for storing a storing amount, a content and a certification information; a computation logic block for comparing a serial number extracted from the received signal with a previously stored serial number if it is determined that the received signal corresponds to balance storing information and storing a balance storing data extracted from the balance storing information into the memory block if the extracted serial number and the previously stored serial number are determined to be the same and the balance storing information transmitted from the radio signal receiving block is determined to be a proper signal; and a non-contact block for storing a balance storing amount

into the memory block using a card storing unit and reading a balance storing amount of the memory block when paying the money (column 11, line 40 thru column 12 line 58 and Figures 13-15).

Takami fails to teach determining whether the received radio signal corresponds to general information or to balance storing information. Dahm teaches an apparatus for storing electronic money in which a mobile device displays general information for functions such as voice calls and Internet and can also determine when the signal corresponds to account balance information (column 7, lines 6-32 and column 9, line 8 thru column 10, line 13). Therefore it would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to modify the teachings of Takami and include determining general information from balance storing information as taught by Dahm because handheld devices, such as phones described by Takami, perform multiple tasks and the device has to recognize based on the received signal how to process and communicate the received signal.

Claim 4, the computation logic block is designed so that a certain amount data is stored into the memory block only when first and second balance storing information are all received from the radio signal receiving block (column 12, lines 6-58 and Figures 13-15).

Claim 7, the non-contact block includes a modulation and demodulation unit for performing a signal transmitting and receiving operation with a card storing unit or a card reader; and a non-contact computation unit for storing a balance storing data into the memory block at the modulation and demodulation unit in the case of the balance storing operation, reading the

balance storing data stored in the memory block in the case of the payment and transmitting the read data to the modulation and demodulation (column 11, line 59- column 12, line 5).

Claim 11, the computation logic block is designed to receive first and second balance storing information from the radio signal receiving block and store the amount data into the memory block only when the balance storing information is determined to be proper information (column 12, lines 15-58).

Claims 12 and 13, the process comes to completion when the logic block is designed to stop the service of the terminal when a proper first balance account information is received from the radio signal receiving block or when a balance storing cancellation information is received from the radio signal receiving block during the balance storing operation (column 11, line 40 thru column 12 line 58 and Figures 13-15).

Claim 14, the computation logic block includes a control means for decrypting a balance storing information based on a radio transmission method, storing the balance storing data into the memory block if the subscriber is determined to be a proper subscriber, storing the balance storing data based on a non contact method, reading the amount data up to the amount confirmed during the payment and transmitting via the non-contact interface unit; a radio interface unit for implementing a data transmitting and receiving operation with the control means, and a non-contact interface unit for implementing a signal transmitting and receiving operation between the

modulation and demodulation unit and the control means (column 11, line 59 thru column 12, line 44).

Claim 18, determining the balance storing information, the information is determined to be a balance storing information when there is a certain pattern signal in the received radio signal (column 11, line 40 thru column 12 line 58 and Figures 13-15).

Claim 19, the step of various certification includes reading a counter value contained in the balance storing information if it is determined that the serial numbers are the same and determining whether the read counter value is the same as a counter value of a function for the previously stored encryption; determining whether the serial key value outputted via the encryption process in which the counter values are the same as the previously stored key value; and determining that a subscriber is a proper subscriber when the key values are the same (column 11, line 40 thru column 12 line 58 and Figures 13-15).

Claim 20, the decryption process of the balance storing information is implemented when the counter value extracted from the balance storing information is the same as the counter value for the previously stored decryption column 11, line 40 thru column 12 line 58 and Figures 13-15.

Claim 21, summing a current balance storing amount and a recent radio balance storing amount to obtain a first summed amount if the subscriber is a proper subscriber and determining

whether the first summed amount is below a certain amount; determining whether the first summed amount obtained is equal to the second summed amount contained in the balance storing information based on the radio transmission method if the first summed amount is below the certain amount; storing the balance storing data if the first summed amount is equal to the second summed amount; and determining the signal as a balance storing error if the first summed amount is greater than a certain amount or the first summed amount is not equal to the second summed amount.

Claim 22, a step for displaying the current storing amount and the storing amount contents when the balance storing data is stored (column 11, lines 41-57).

8. Claims 5, 6, 8, 9, 15, 23-25 and 27-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takami et al. (hereinafter Takami) U.S. Patent 6,311,167 in view Dahm et al. (hereinafter Dahm) U.S. Patent 6,466,783 in further view of Davis et al. (hereinafter Davis) U.S. Patent 6,105,006.

Regarding claims 5, 6, 8, 15 and 23-25 Applicant contests the motivation to combine the teachings of Takami with the teachings of Davis. Takami teaches the radio receiving block contains a key input unit for inputting a certain key signal; a display unit for displaying a general information or a balance storing information as a character or digit; a control means for decrypting an output signal of the high frequency processing unit, transmitting to the display unit, transmitting to the computation block if the information is the balance storing information

or is a balance storing content check key signal from the key input unit, receiving a balance storing content information and displaying the same on the display unit (column 11, lines 41-58).

Takami fails to teach a tone signal generator for generating a call sound or an error sound during the balance storing operation by the control means. Davis teaches a financial messaging system over radio frequency in which audio signals are used to signal error messaging during the transaction and service is stopped with improper signals (column 11, line 59 thru column 12, line 5 and column 23, lines 27-38). Therefore it would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to modify the teachings of Takami since both Takami and Davis teach storing electronic money with the use of radio frequency and comparing pertinent encrypted data to complete transactions. There is sufficient motivation to combine references because it provides an efficient manner for communicating messages to users for operations important to a customer and provide common auditory signals for unsuccessful transactions that a customer would be familiar with and easily comprehend.

Claim 9, Takami teaches the control means is designed to decrypt an output signal of the radio signal receiving block, extract a certification information if there is a service stop signal, disables the memory block when the extracted certification information is coincided with the previously stored certification information, and stop the service of the card (column 11, line 59-column 12, line 5).

Regarding independent claim 27, Takami teaches a method for storing electronic money using radio communication and a storing unit comprising: determining whether received balance

storing information corresponds to a first balance storing information; determining whether the received balance storing information is a proper signal by performing a certification of the first balance storing information if it is determined that the received balance storing information corresponds to the first balance storing information (column 11, line 59 thru column 12, line 59.

Takami fails to teach determining whether the received radio signal corresponds to general information or to balance storing information. Dahm teaches an apparatus for storing electronic money in which a mobile device displays general information for functions such as voice calls and Internet and can also determine when the signal corresponds to account balance information (column 7, lines 6-32 and column 9, line 8 thru column 10, line 13). Therefore it would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to modify the teachings of Takami and include determining general information from balance storing information as taught by Dahm because handheld devices, such as phones described by Takami, perform multiple tasks and the device has to recognize based on the received signal how to process and communicate the received signal.

Takami fails to teach setting a temporary service stop state if it is determined that the received balance storing information is a proper signal and waiting to receive second balance storing information; performing a certification of the second balance storing information when the second balance storing information is received and determining whether the second balance storing information is a proper signal; and storing a request amount if it is determined the second balance storing information is a proper signal and implementing an available state of the card. Davis teaches a system in which a temporary service stop state if it is determined that the received balance storing information is a proper signal and waiting to receive second balance

storing information; performing a certification of the second balance storing information when the second balance storing information is received and determining whether the second balance storing information is a proper signal; and storing a request amount if it is determined the second balance storing information is a proper signal and implementing an available state of the card (column 21, line 51 thru column 23, line 15). It would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention that the teachings of Takami could be modified to include the teachings of Davis, since both teaches the ability to store electronic money with the use of radio frequencies and compare corresponding encrypted data to authenticate all financial transaction.

Claim 28, Davis teaches completing a balance storing operation when a proper balance storing cancellation information is received after the first balance storing information is received (column 22, line 39 thru column 23, line 15).

Claim 29, Davis teaches certification includes extracting the storing request amount from the first balance storing information, summing the thusly extracted amount and the balance, and determining whether the summed amount is greater than the storing limit amount; encrypting the value as a certain key value when the summed amount is the same as a is smaller than the string limit amount and determining whether the value equals the value extracted from the first balance storing information; and encrypting the first balance storing information as a certain key value when the encrypted value is equal to the extracted value and changing to a decimal value and displaying the decimal value (column 14, lines 53-67).

Claim 30, Davis teaches encryption is performed using a certain key value provided from the first and second certification providers (column 14, lines 53-67).

Claim 31, Davis teaches certification includes formatting the data contained in the second balance storing information and encrypting using a certain key value of the certification provider; determining whether the encrypted value is equal to an encrypted value contained in the second balance storing information; and determining that the signal as a proper signal if the encrypted values are equal (column 23, line 27 thru column 14, line 9).

Claims 32 and 33, Davis teaches the certain key value is provided from a second certification provided, not from a radio communication service provider and is previously stored (column 14, lines 50-67).

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stefano Karmis whose telephone number is (703) 305-8130. The examiner can normally be reached on M-F: 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent Millin can be reached on (703) 308-1065. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Respectfully Submitted
Stefano Karmis
01 March 2005

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PRIMARY EXAMINER

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